

**REMARKS**

Claims 1-3, 7-12, 17, 18, and 20-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Number 5,455,958 by Flurry et al. (hereinafter "Flurry") in view of U.S. Patent Number 6,157,393 by Potter et al. (hereinafter "Potter"). Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Flurry in view of Potter as applied to claim 1 above, and further in view of U.S. Patent Number 5,703,806 by Puar et al. (hereinafter "Puar"). Claims 14 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Flurry in view of Potter as applied to claim 2 above, and further in view of U.S. Patent Number 6,311,204 by Mills (hereinafter "Mills"). Claims 5-6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Flurry in view of Potter as applied to claim 2 above, and further in view of U.S. Patent Number 6,252,600 B1 by Kohli et al. (hereinafter "Kohli"). No claims have been amended, cancelled or added. Reconsideration of this application and the new arguments below is respectfully requested.

Claim(s) 1-3, 7-12, 17, 18 and 20-27 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,455,958 to Flurry et al. in view of U.S. Patent No. 6,157,393 to Potter et al. In regards to claim 1, the Examiner states :

Potter et al. **discloses** a time allocator (timing buffer 248) for graphics accelerator 200 (See Fig. 2C & 3A; col. 9, lines 58-67...these connections enable fractional amounts of data to be transmitted...col. 10, lines 7-23;...only fractional amounts of graphical data for pixels are received by the destination processor during each clock cycle...col. 2, lines 35-45) which suggests arbitrating the use of a graphics-rendering engine (...the graphics accelerator.. includes a controller.. causes... processor to produce.. amount of graphical data during each clock cycle...col. 2, lines

60-65). Potter et al. further **discloses** programmability for usage of the graphics-rendering engine (...the first amount may be an odd number ...the second amount may be calculated by rounding up...col. 2, lines 7-20). Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify the device as taught by Flurry et al. with the feature "a time allocator arbitrating the use of graphics-rendering engine between the two or more independent images" as taught by Potter et al. **because** it increases processing efficiency.  
(Office Action, pages 3-4)

Applicants respectfully traverse these rejections and submit that the combination of Flurry and Potter do not make claim 1 obvious under 35 U.S.C. §103(a). Claim 1 states:

An apparatus, comprising:

...  
...

a time allocator to arbitrate the use of the graphics-rendering engine between the two or more independent images, wherein the time allocator comprises a first module to establish a programmable elapsed period of time to use the graphics-rendering engine, the period of time is defined by a programmable number of unit time periods, where each unit time period is defined by a programmable number of real-time quanta.

(Emphasis Added)

Potter does not disclose that a time allocator arbitrates the use of the graphic-rendering engine between two or more independent images. Potter states:

A controller causes each graphics processor to produce a second amount of graphical data during each clock cycle of a common clock, where the first amount of graphical data is comprised of at least two of the second amounts of graphical data.

(Emphasis added) (Potter, col. 2, lines 62-65)

Potter explicitly states that the first amount of graphical data is comprised of at least two of the second amounts of graphical data. This clearly shows that the first and second amounts of graphical data are related. Claim 1 states that the two or more images are independent images and not related. The independent images as claimed in claim 1 are clearly differentiated from the related amounts of graphical data disclosed in Potter.

Further, Potter does not disclose the use of images as a whole, but instead refers to an amount of graphical data. Claim 1 teaches two or more independent images. An amount of graphical data is not the same as a complete image, as taught by claim 1. Nothing in Potter suggests that an amount of graphical data actually represents a complete image. Hence the use of amounts of graphical data is clearly differentiated from complete images as taught in claim 1.

Applicants also submit that Flurry fails to disclose “a time allocator to arbitrate the use of the graphics-rendering engine between the two or more independent images” and “independent images.” Flurry is completely silent regarding a time allocator to arbitrate the use of the graphics-rendering engine between the two or more independent images and the use of independent images. If a reference does not discuss a limitation, then that reference cannot disclose or suggest that limitation.

Furthermore, even if Flurry and Potter were combined, such a combination would lack “a time allocator to arbitrate the use of the graphics-rendering engine between the two or more independent images.” By way of contrast, the combination of Flurry and Potter would disclose a controller where the first amount of graphical data is comprised of at least two of the second amounts of graphical data.

Therefore, in view of the above distinction, neither Flurry nor Potter, individually or in combination, disclose each and every limitation of claim 1. As such, claim 1 is not rendered obvious by Flurry in view of Potter under 35 U.S.C. § 103(a).

Applicants respectfully submit that Flurry does not suggest a combination with Potter, and Potter does not suggest a combination with Flurry because Flurry specifically teaches away from such a combination. As stated by the Examiner, Flurry is

silent about time allocating to arbitrate the use of the graphics-rendering engine between two or more independent images. (Office Action, page 3.) Hence, it would be impermissible hindsight to combine Flurry with Potter based on applicants' own disclosure.

Claims 2-12, 14 and 16 all depend upon and include the limitations of claim 1. Therefore claims 2-12, 14 and 16 are also not made obvious by the combination of Flurry and Potter under 35 U.S.C. §103(a).

Likewise, independent claim 24 includes the limitation "a time allocator to arbitrate the use of the graphics-rendering engine between the two or more independent images." As discussed above, the combination of Flurry and Potter do not teach or suggest, "a time allocator to arbitrate the use of the graphics-rendering engine between the two or more independent images." As such, claim 24 is not made obvious by the combination of Flurry and Potter under 35 U.S.C. § 103(a).

In regards to independent claim 17, the Examiner states:

Flurry et al. **discloses** the concurrently rendering instructions (col. 5, lines 25-30); storage in a first memory area instruction for a first independent image; restoring from a second memory area instruction for a second independent image (...each entry in the domain array 70 contains a link to the device process...RCM 22 can authorize access to independent domains of display devices independently...a device domain is an environment within the device to which a graphics process is providing data...col. 7, lines 1-65).

(Office Action, page 5)

Applicants respectfully traverse these rejections and submit that the combination of Flurry and Potter do not make claim 17 obvious under 35 U.S.C. §103(a). Claim 17 states:

A method, comprising:  
concurrently rendering instructions associated with multiple independent images within a first instruction-stream;  
storing in a first memory area information representing a first rendering context associated with a first independent image;  
restoring from a second memory area instructions representing a second rendering context associated with a second independent image, wherein the first memory area and the second memory area are included in a plurality of memory areas;

...

...

(Emphasis Added)

Flurry does not disclose the concurrent rendering of instructions associated with multiple independent images within a first instruction-stream. As cited by the Examiner,

Flurry states:

In the preferred embodiment that is discussed, a single display device 12 is connected to the RCM 22. However, after examining the accompanying figures, it should be apparent to those skilled in the art, that this invention is designed to function with several display devices connected to it.

(Flurry, col. 5, lines 25-30)

Flurry is simply stating that a rendering content manager (hereinafter "RCM") allows for multiple display devices to be connected to it. This does not disclose the concurrent rendering of instructions associated with multiple independent images within a first instruction-stream as claimed in claim 17. Multiple independent images are distinct from multiple display devices as disclosed by Flurry above. Flurry is completely silent on the concurrent rendering of instruction associated with multiple independent images.

Further, Flurry fails to disclose that the instructions associated with multiple independent images are within a first instruction stream, as claimed in claim 17. Flurry is completely silent on this limitation.

Applicants also submit that Potter fails to disclose "the concurrent rendering of instructions associated with multiple independent images within a first instruction-stream" and "the instructions associated with multiple independent images are within a first instruction stream." Potter is completely silent regarding the concurrent rendering of instructions associated with multiple independent images within a first instruction-stream. Potter is also silent regarding the instructions associated with multiple independent images are within a first instruction stream. If a reference does not discuss a limitation, then that reference cannot disclose or suggest that limitation.

Furthermore, even if Flurry and Potter were combined, such a combination would lack "the concurrent rendering of instructions associated with multiple independent images within a first instruction-stream" and "the instructions associated with multiple independent images are within a first instruction stream." By way of contrast, the combination of Flurry and Potter would disclose an RCM that allows for multiple display devices being connected to it.

Therefore, in view of the above distinction, neither Flurry nor Potter, individually or in combination, disclose each and every limitation of claim 17. As such, claim 17 is not rendered obvious by Flurry in view of Potter under 35 U.S.C. § 103(a).

Applicants respectfully submit that Flurry does not suggest a combination with Potter, and Potter does not suggest a combination with Flurry. It would be

impermissible hindsight to combine Flurry with Potter based on applicants' own disclosure.

Claims 18 and 20 all depend upon and include the limitations of claim 17. Therefore claims 18 and 20 are also not made obvious by the combination of Flurry and Potter under 35 U.S.C. §103(a).

Likewise, independent claims 21 and 25 includes "the concurrent rendering of instructions associated with multiple independent images within a first instruction-stream" and "the instructions associated with multiple independent images are within a first instruction stream." As discussed above, the combination of Flurry and Potter do not disclose, "the concurrent rendering of instructions associated with multiple independent images within a first instruction-stream" and "the instructions associated with multiple independent images are within a first instruction stream." As such, claims 21 and 25 are not made obvious by the combination of Flurry and Potter under 35 U.S.C. § 103(a).

Claims 22, 23, 26 and 27 all depend upon and include the limitations of claim 17. Therefore claims 22, 23, 26 and 27 are also not made obvious by the combination of Flurry and Potter under 35 U.S.C. §103(a).

**Conclusion**

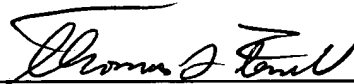
It is respectfully submitted that in view of the amendments and remarks set forth herein, the rejections and objections have been overcome. Applicants reserve all rights with respect to the application of the doctrine equivalents. If there are any additional charges, please charge them to our Deposit Account No. 02-2666. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: \_\_\_\_\_

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Thomas S. Ferrill  
Reg. No. 42,532  
Tel.: (408) 720-8300

12400 Wilshire Boulevard  
Seventh Floor  
Los Angeles, CA 90025-1026